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Date: February 12, 2007 **Number of pages** (including cover): 4

Certificate
FEB 22 2007
of Correction

To: US Patent and Trademark Office

Fax No.: (571) 273-8300

Serial No.: 10/754,911-Conf. #8718

Title: METHODS AND COMPOSITIONS FOR PEPTIDE AND PROTEIN LABELING

From: MaryDilys S. Anderson, Ph.D.

Direct dial: (617) 646-8000

Our File #: M0656.70088US01

CERTIFICATE OF FACSIMILE TRANSMISSION 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being transmitted via facsimile to the attention of US Patent and Trademark Office, FAX number (571) 273-8300, at the United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450, in accordance with 37 C.F.R. §1.6(d), on February 12, 2007.

Nicole M. Hawes

ORIGINAL DOCUMENTS WILL NOT BE MAILED.

MESSAGE: Transmitted herewith is/are Request for Certificate of Correction (No Fee) (1 page) Certificate of Correction (1 page) and page of claims showing correction.

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PATENTS TRADEMARKS COPYRIGHTS TECHNOLOGY TRANSFERS LITIGATION

Docket No.: M0656.70088US01
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Alice Y. Ting
Serial No.:	10/754,911
Confirmation No.:	8718
Filed:	January 9, 2004
Patent No.:	7,172,877
For:	METHODS AND COMPOSITIONS FOR PEPTIDE AND PROTEIN LABELING
Examiner:	T. D. Wessendorf
Art Unit:	1639

Certificate of Transmission Under 37 CFR 1.8
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Dated: 2/12/07
Nicole M. Hawes

REQUEST FOR CERTIFICATE OF CORRECTION
PURSUANT TO 37 CFR 1.322

Attention: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Upon reviewing the above-identified patent, Patentee noted a typographical error which should be corrected.

In the Claims:

In Claim 15, column 68, line 39, please delete "amino acid of" and insert --amino acid sequence of--

The error was not in the application as filed by applicant; accordingly no fee is required.

Transmitted herewith is a proposed Certificate of Correction effecting such amendment. Patentee respectfully solicits the granting of the requested Certificate of Correction.

Dated: February 12, 2007

Respectfully submitted,

By _____
MaryDilys S. Anderson, Ph.D.
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.	:	7,172,877
APPLICATION NO.	:	10/754,911
ISSUE DATE	:	February 6, 2007
INVENTOR(S)	:	Alice Y. Ting

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In Claim 15, column 68, line 39, please delete "amino acid of" and insert --amino acid sequence of--

Certificate of Transmission Under 37 CFR 1.8
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Dated: 2/12/07 Signature: (Nicole M. Hawes)

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        195                 200                 205

Met Ala Met Arg Arg Val Glu Glu Ser Val Val Asn Gln Gly Trp Ile
    210                 215                 220

Thr Leu Gln Glu Ala Gly Ile Asn Leu Asp Arg Asn Thr Leu Ala Ala
225                 230                 235                 240

Met Leu Ile Arg Glu Leu Arg Ala Ala Leu Glu Leu Phe Glu Gln Glu
                245                 250                 255

Gly Leu Ala Pro Tyr Leu Ser Arg Trp Glu Lys Leu Asp Asn Phe Ile
            260                 265                 270

Asn Arg Pro Val Lys Leu Ile Ile Gly Asp Lys Glu Ile Phe Gly Ile
        275                 280                 285

Ser Arg Gly Ile Asp Lys Gln Gly Ala Leu Leu Leu Glu Gln Asp Gly
    290                 295                 300

Ile Ile Lys Pro Trp Met Gly Gly Glu Ile Ser Leu Arg Ser Ala Glu
305                 310                 315                 320

Lys
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What is claimed is:

1. A method for labeling a target protein comprising contacting a fusion protein with a biotin analog, and allowing sufficient time for the biotin analog to be conjugated to the fusion protein via an acceptor peptide, in the presence of a biotin ligase mutant,

wherein the fusion protein is a fusion of the target protein and the acceptor peptide, and

wherein the biotin ligase mutant is a mutant of SEQ ID NO: 1 and comprises one or more amino acid substitutions selected from the group consisting of T90G, T90V, T90A, N91S, C107G, Q112M, G115A, Y132G, Y132A, S134G, V189G and I207S.

2. The method of claim 1, wherein the biotin analog comprises an aliphatic carboxylic acid tail.

3. The method of claim 1, wherein the biotin analog comprises a substitution at a trans-ureido nitrogen (N) of biotin.

4. The method of claim 1, wherein the biotin analog is selected from the group consisting of an N-ketone biotin analog, a ketone biotin analog, an N-azide biotin analog, an azide biotin analog, an N-acyl azide biotin analog, an NBD-GABA biotin analog, a 1,2-diamine biotin analog, an N-alkyne biotin analog and a tetrathiol biotin analog.

5. The method of claim 1, wherein the target protein is a cell surface protein.

6. The method of claim 1, wherein the fusion protein is in a cell.

7. The method of claim 6, wherein the cell expresses the biotin ligase mutant.

8. The method of claim 6, wherein the cell is a eukaryotic cell.

9. The method of claim 6, wherein the cell is a bacterial cell.

10. The method of claim 8, wherein the eukaryotic cell is a mammalian cell, a Drosophila cell, a Zebrafish cell, a Xenopus cell, a yeast cell or a C. elegans cell.

11. The method of claim 1, wherein the acceptor peptide comprises an amino acid sequence of SEQ ID NO: 4.

12. The method of claim 1, wherein the acceptor peptide comprises an amino acid sequence of SEQ ID NO: 5.

13. The method of claim 1, wherein the acceptor peptide is N- or C- terminally fused to the target protein.

14. The method of claim 1, wherein the biotin analog is N-ketone biotin analog.

15. The method of claim 1, wherein the biotin ligase mutant has an amino acid sequence of SEQ ID NO: 6.

16. The method of claim 1, wherein the biotin ligase mutant comprises amino acid substitutions of T90G and N91S.

17. The method of claim 16, wherein the biotin analog is N-alkyne biotin analog.

18. The method of claim 16, wherein the biotin ligase mutant has an amino acid sequence of SEQ ID NO: 7.

19. The method of claim 1, wherein the method is performed in a cell free environment.

20. The method of claim 1, wherein the method is performed in a cell.

21. The method of claim 1, wherein the method is performed in a subject.

22. The method of claim 1, wherein the acceptor peptide is fused to the target protein via a cleavable bond or linker.

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